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UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

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REPLY TO: 5230 Forest Insect Evaluation

May 2, 1972

SUBJECT: Supplemental Evaluation (Descanso District)



TO: Forest Supervisor, Cleveland N.F.

A verbal request for entomological assistance was made by Jack Reveal, Forest Resource Officer, regarding bark beetle buildup on the Descanso District. The problem was evaluated on April 18-19, 1972 by Max Ollieu, Entomologist, Regional Office, accompanied by Bard Beutler, Assistant Ranger, and Jim Bridges, District Resource Officer.

Two areas of the Descanso District were examined: Laguna Mountain and Corte Madera Valley. Parts of both areas received severe ecological impact from the Laguna fire in September 1970. Also, since 1968, precipitation has been below the 25 inches per year average. From July 1971 to April 21, 1972, only 9.24 inches of rain had fallen.

LAGUNA MOUNTAIN

The Descanso District treats an average of 620 trees per year on National Forest land on Laguna Mountain.<sup>1/</sup> Trees treated per year have correlated inversely with precipitation. For instance, in 1968, the last year of average or above average moisture, only 315 trees were treated. Trees treated in 1969, 1970 and 1971 were 822, 739, and 820, respectively. To date, 836 have been treated in Fiscal Year 1972 with at least that many remaining to be treated.

The California flatheaded borer, Melanophila californica, attacks Jeffrey pine, Pinus jeffreyi. This pest historically has killed more pine on Laguna Mountain than other bark beetles. Infested trees examined on Laguna Mountain in 1972 to mid-April totalled 1,163 of which 741 contained flatheaded borers. Pine engraver beetles, Ips spp., killed 400 Jeffrey pine and Coulter pine, Pinus coulteri, and western pine beetle, Dendroctonus brevicomis, killed 22 Coulter pines. Western pine beetle only attacks Coulter pine on the Descanso District. Recently, the majority of attacked trees have been infested by pine engraver beetles. Top kills are common and green slash is heavily attacked. One 10-acre patch thinned for dwarf mistletoe in early February contained heavy brood of ips in late larval instars. District Resource Officer Bridges estimates a high percentage of trees now fading are due to ips.

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<sup>1/</sup> Swain, K.M. Biological Evaluation - Laguna Mountain Bark Beetle Maintenance Control Project, Descanso District, Cleveland National Forest, January 1972. U.S. Forest Service, Div. of Timber Mgt., San Francisco, California. 8 pp.

2-Forest Supervisor, Cleveland N.F., 5/2/72

### CORTE MADERA VALLEY

The Corte Madera Valley contains 860 acres of timber on National Forest <sup>2/</sup> land and 840 on private land which fall in Class II insect control priority. Most of the timber on Federal land and to a lesser extent, that on private land, was damaged or killed by the Laguna fire in September 1970.

The Office of Economic Preparedness through the Corps of Engineers financed removal of fire-killed or damaged timber on private lands both at Corte Madera and Mt. Laguna. Nevertheless, weakened timber remained and bark beetle populations increased. Corte Madera Valley currently contains 200-300 infested trees.

Corte Madera Valley contains a high percentage of Coulter pine and some scattered Jeffrey pine. The primary bark beetle is the western pine beetle and ips in Coulter pine. An occasional Jeffrey pine is killed by the California flatheaded borer.

Examination of the Valley showed numerous single- and multiple-tree infestations. Ips engraver beetles were found in the adult stage and Jeffrey pine beetle in the pupal and adult stages. One knoll on private land contained particularly heavy tree mortality. Upon close examination, it was found the knoll contained 28 red-crowned trees out of 88. Most of the mortality on the knoll was scattered with the exception of one group of eight trees. A week-end home occupied the knoll as well.

### DISCUSSION

The Descanso District faces a serious bark beetle buildup in 1972. Drought conditions since 1968 combined with the 1970 Laguna fire have supplied abundant weakened trees and an ideal bark beetle habitat.

Chemical control will be required in highest priority Class I areas on Laguna Mountain with lindane (R-5 FSM 5240, Emergency Directive No. 1, May 3, 1968). The Forest will be allocated an additional \$4,800 for chemical control for the remainder of the fiscal year. This amount, however, will not cover treatment of all infested trees in Class I areas. Therefore, it will be necessary to leave some infested trees which are located away from high-use areas although they are still within Class I priority.

An effort should be made to treat infested trees on private land in Class I high-use areas on Laguna Mountain. Those tracts near the Sunrise Highway in Sections 11, 12, 13, and 24, T.15S., R.5E., should receive the most consideration.

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<sup>2/</sup> Insect Control Plan, Cleveland National Forest, Descanso District-1969.

3-Forest Supervisor, Cleveland N.F., 5/2/72

The highest priority for control should be given to trees infested with the California flathead borer. Ips infested trees should be assigned a lower priority for control than either flatheaded borer or western pine beetle. Groups of trees infested with ips engraver beetles should be given higher priority than single trees killed by the same pest. An infested tree with the upper portion of its crown killed but the lower crown and bole green should probably be left until the entire crown fades or lower bole becomes infested.

#### RECOMMENDATIONS

These recommendations focus on the immediate problem of bark beetle buildup on the Descanso District and only serve to supplement the more comprehensive biological evaluation completed in January 1972.1/

1. Treatment of infested pines with lindane should be confined to the highest value Class I locations such as campgrounds and other developed areas as money and manpower permit. Private land on Laguna Mountain which qualifies should receive treatment if possible.
  - a. Within a treatment area, trees infested with flatheaded borer and/or western pine beetle should receive the highest priority for treatment. Group kills by ips engraver beetle should also be treated when individual trees within those groups have over half the bole infested.
  - b. Ips infested trees with less than half the bole killed should be left to serve as trap trees. When the lower bole becomes infested these should be dropped and treated as well.
2. The possibility of initiating a cooperative insect control project with the California Division of Forestry for Corte Madera Valley should be followed up. The Forest can contact the CDF at Riverside (see 5230, Biological Evaluation, Laguna Mountain, January 1972).
3. The bark beetle infestation in Corte Madera Valley is all Class II priority and threatens only a small amount of National Forest timber. Nevertheless, the infestation on private land is of considerable importance to the private landowners. A joint evaluation between the California Division of Forestry and the Forest Service should be scheduled during 1972.

  
ALDEN L. WUOLTEE

Acting Chief, Division of Timber Management

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